Changes KFLOP and KMotion Released Versions 4.33j -> 4.33k 1/2/2015

KFLOP

Fixes serious SnapAmp bug possibly causing "jerky" motion and other problems when the temperature readings are exactly 21.3 deg C. Most systems only have this low of a SnapAmp Temperature shortly after power up. The issue was triggered by special FPGA code 0xAA to KFLOP indicating SnapAmp communication possibly not completed. Real data of 0xAA is handled by second test indicating whether 0xAA is real data or no data available. DSP Firmware handled this incorrectly. Real 0xAA data was always interpreted as no data available. The routine containing the bug is only used for slow temperature readings. 0xAA = 170 counts (1/8th degree per count) = 21.3 deg C. Any SnapAmp temperature sensors (4 possible) at this exact temperature could cause communication stalls, servo sample variations (jittery motion), and extended User Thread Sleep Times.

New Script Commands to support Rapid Rate Override

SetRapidFRO F Set Rapid Feed Rate Override (1.0 = Normal Feed Rate) ie. SetRapidFRO 0.9

SetRapidFROwRate F R Set Rapid Feed Rate Override (1.0 = Normal Feed Rate) with rate/based on caller specified time (in seconds) to change from FRO 1.0 to 0.0 ie. SetRapidFROwRate 0.9 0.25

BegRapidBuf Inserts into coordinated move buffer command to indicate Rapid is in progress and to use Rapid FRO ie. BegRapidBuf

EndRapidBuf Inserts into coordinated move buffer command to indicate Rapid is no longer in progress and to resume use normal FRO ie. EndRapidBuf

KMotionCNC

Rapid Rate Override – now separate from Feed Rate Override

Maintain Backup of KMotionCNC configuration

Added M0,M1,M2,M30 Configurable

Added Special Actions for Halt, Stop, CycleStart, Program Start, Program Exit, Feedhold, Resume

Option to perform M6 Tool Change after Editing Tool Table

Now disables Tool Table/Fixture/Zero/Set/ZeroAll/Simulate/Run/Send etc. buttons while running GCode

KMotion.exe

Fix issue with KMotion Axis Screen Current Graphical Gauge for second Snap Amp

.NET

Expose
        RapidFeedRateOverride
        UseOnlyLinearSegments;
        ArcsToSegs;
        FeedRateRapidOverride
        SetAxisDefinitions

C Examples

Ellipse.c/EllipseTest.c - Added Coordinated Motion Ellipse Example

DelayFeedbackCallBack.c – Resonant damping delayed feedback example.

SafeZ_SpindleOff.c – Move to Safe Z and turn off Spindle (Halt Action) example.

WaitForBitMessageBox.c - Example to wait for a signal (clamps) before continuing GCode.

RelayDriverOutputsOn.c - Sets KStep's relay drivers on